

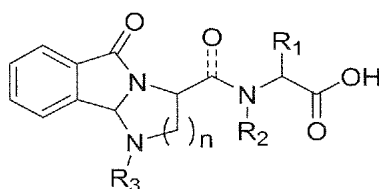
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

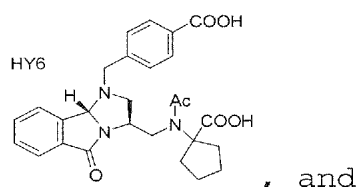
1-42 (Cancelled).

43. (Currently Amended) ~~The A~~ ligand according to ~~claim 88, wherein the ligand is a ligand according to~~ formula IV:

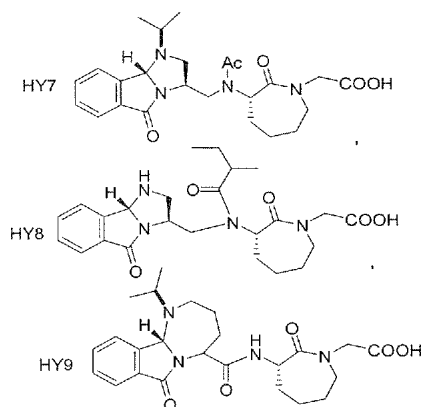


wherein R<sub>1</sub> is the side chain of an amino acid selected from the group consisting of amino acids mentioned in tables 1, 2, 3, 7 and 9 ~~a natural or unnatural amino acid~~, R<sub>2</sub> is an acyl group or hydrogen and R<sub>3</sub> is aryl or alkyl, which optionally is substituted, and dotted lines indicates an optional carbonyl, with the proviso that if the optional carbonyl is present then R<sub>2</sub> is hydrogen and if the optional carbonyl is not present, then R<sub>2</sub> is an acyl group.

44. (Currently Amended) The ligand according to claim 43, ~~wherein said ligand is~~ selected from the group consisting of



, and



45 (cancelled)

46. (Withdrawn - Currently Amended) The An isolated ligand-protein binding pair comprising a ligand according to claim ~~88~~ 95, and a protein, wherein said binding pair is selected from the group consisting of:

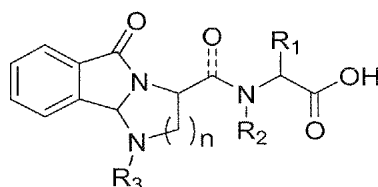
- a) HY6 and (Myosin chain (Q63358) or NF-kappa B-repressing factor (Transcription factor ITBA4 protein) (O15226)) [[.]]
- b) HY7 and (Zinc finger protein 339 (Q9BRPO) or DNA repair protein RAD52 homolog (P43351)) [[.]]
- c) HY8 and (Zinc finger protein 339 (Q9BRPO) or DNA repair protein RAD52 homolog (P43351)) [[.]]
- d) HY9 and Zinc finger protein 339 (Q9BRPO) or DNA repair protein RAD52 homolog (P43351).

47-88 (Cancelled).

89 (Withdrawn - Currently Amended). The ligand according to claim ~~88~~ 43, wherein R1 is selected from the group consisting of compound numbered 3, 4, 7, 8, 10, 15, 60 and 61 and/or R2 is selected from the group consisting of compounds numbered 56, 57, 58 and 59.

90 (Previously Presented). The ligand according to claim 43, wherein  $R_1$  is the side chain of an amino acid selected from the group consisting of compound 3 to 47, 64, 66, 67, 71, 73, 74, 103 to 106 and 128 of tables 1, 2, 3, 7 and 9,  $R_2$  is selected from the group consisting of compounds 117 to 126 as outlined in table 9 and hydrogen and  $R_3$  is selected from the group consisting of compounds 103 to 116 and 128 of table 9.

91 (New). A ligand according to formula IV:



wherein  $R_1$  is the side chain of an amino acid selected from the group consisting of amino acids mentioned in tables 1, 2, 3, 7 and 9,  $R_2$  is an acyl group or hydrogen and  $R_3$  is aryl or alkyl, which optionally is substituted, with the proviso that if the optional carbonyl is present then  $R_2$  is hydrogen and if the optional carbonyl is not present, then  $R_2$  is an acyl group.

92 (New). The ligand according to claim 91, wherein  $R_1$  is the side chain of an amino acid selected from the group consisting of compound 3 to 47, 64, 66, 67, 71, 73, 74, 103 to 106 and 128 of tables 1, 2, 3, 7 and 9,  $R_2$  is selected from the group consisting of compounds 117 to 126 as outlined in table 9 and hydrogen and  $R_3$  is selected from the group consisting of compounds 103 to 116 and 128 of table 9.

93 (New). The isolated ligand-protein binding pair of claim 95, wherein the ligand is HY6, and the protein is a protein bound by HY6.

94 (New). The isolated ligand-protein binding pair of claim 93 wherein the protein is myosin chain (Q63358) or NF-kappa B-repressing factor (Transcription factor IBA4 protein 015226).

95 (New). An isolated ligand-protein binding pair comprising a ligand and a protein, wherein the ligand is the ligand of claim 43 and the protein is a protein bound by said ligand.

96 (New). The isolated ligand-protein binding pair of claim 95 wherein the ligand is HY6, HY7, HY8 or HY9, and the protein is a protein bound by HY6, HY7, HY8 or HY9, respectively.

97 (New). In a method of binding a protein which is bound by a ligand, the improvement comprising the ligand being the ligand of claim 43, and the protein is a protein bound by said ligand.

98 (New). The method of claim 97 wherein the ligand is HY6, HY7, HY8 or HY9.

99 (New). The method of claim 98 in which the ligand is HY6.

100 (New). The method of claim 99 in which the ligand is HY6 and the protein is myosin chain (Q63358) or NF-kappa B-repressing factor (Transcription factor IBA4 protein 015226).

101 (New). The method of claim 97, wherein said ligand was identified as a ligand binding said protein by a process comprising the steps of

- (a) synthesizing a ligand library onto resin beads to form an immobilized ligand library, wherein each bead of the immobilized library comprises one member of the ligand library;
- (b) incubating the immobilized ligand library with one or more protein mixture;
- (c) detecting an immobilized ligand-protein binding pair from the incubation mixture;

- d) isolating the resin bead comprising the ligand-protein binding pair; and
- e) identifying the ligand of the ligand-binding pair on the isolated resin bead, wherein at least part of the identification process is performed directly on the bead; and
- f) identifying the protein of the ligand-binding pair on the isolated resin bead, wherein at least part of the identification process is performed directly on the bead.